

## **Application # FA1- 00600-1 (CIRM Center of Excellence)**

### **PROPOSAL:**

This applicant proposes construction of a four-story building (one floor of which will be below grade) to house laboratories for existing and future stem cell researchers, core facilities (including a cell and tissue storage facility), and a variety of support spaces. The \$41.4 million project will include 65,708 gross square feet (gsf), which the applicant indicates provides 58,015 assignable square feet (asf). However, when federal space inventory guidelines are applied to the architectural drawings included in the application, the assignable area calculates at 44,119 asf. The applicant requests CIRM funding of \$25 million.

The project is to house 12 Principal Investigators (PIs) engaged in stem cell research, three of which are existing PIs engaged in stem cell related research and nine of which will be future recruits. Currently, the applicant has six PIs and anticipates recruiting a total of ten new PIs. According to the applicant (see comment letter of March 25<sup>th</sup>), the project includes four additional laboratories that will address “the provision of space for visiting scientists and shared stem cell lab space for researchers from other institutions.”

The space proposed includes the typical laboratory, laboratory support space, office space, four core laboratories, and a cell and tissue storage facility to accommodate needs at this institution and other CIRM-funded institutions. The CIRM-funded project also includes a fitness center equipped with showers, a conference center, extensive food service and library space, and general administrative and interactive space. Completion of the project is scheduled for July 2010.

**Space Summary Table (as proposed)**

<b>Space Category</b>	<b>Amount of Space (asf)</b>	<b>Percent of Total</b>	<b>Asf per PI at 12 PIs</b>
Lab, Lab support & PI Offices	25,010	56%	2,084
Core Facilities	1,010	2%	84
Cell and Tissue Storage	6,450	15%	538
Conf center, kitchen, exercise and showers	7,729	18%	644
Admin and Support	3,920	9%	327
Total	44,119*	100%	3,677

\*The application indicates 58,015 asf. A more precise amount of assignable area is 44,119 asf as noted in the table. The application includes rest rooms, building services and circulation area that are not included in the definition of assignable square feet under federal space inventory guidelines.

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### **STAFF ANALYSIS**

#### **VALUE:**

#### **Costs:**

**Cost Summary Table**

<b>Cost Category</b>	<b>Total Amount</b>	<b>Amount/PI@12</b>
Building	\$40,049,435	\$3,337,453
Group 2 Equipment	\$1,357,732	\$113,144
Total	\$41,407,167	\$3,450,597
CIRM Amount	\$25,000,000	\$2,083,333
Applicant Amount	\$16,407,167	\$1,367,264

The planned space per PI in the facility of 3,677 asf is second highest among all applications in the CIRM Institutes and CIRM Centers funding categories. A contributing factor is the large component of space that will serve users from outside the building in addition to the building occupants. These include:

- Conference Center
- Exercise and Shower Facility
- Extensive Food Service Space (some amount is needed for building users)

It is noted that these facilities will be attractive to building occupants and may provide opportunities for interaction with other investigators located at the site. These facilities, however, do not expand stem cell laboratory capacity in California.

In addition, the facility includes 6,500 gsf for a cell and tissue storage facility. The applicant indicates that this core facility is planned to be a statewide or regional resource. This core was not reviewed in detail by the Grants Working Group, and staff cannot judge the extent to which it relates to the program at this institution. Note, however, that CIRM's Strategic Plan reserves capital funds for statewide cores and stem cell banks to be considered in a future Request for Applications.

If the application is adjusted to reflect just the proposed space that is directly related to stem cell research, an amount of laboratory space that would provide space for visiting faculty at half the amount proposed, and deferral of core for cell and tissue storage, the following represents the remaining proposed space to be considered for purposes of establishing the cost of the CIRM-funded space and the related matching and leverage funding amounts:

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Space Summary Table (revised)

Space Category	Amount of Space (asf) in application	Revised Amount of Space (asf)	Percent of Total	Asf per PI at 12 PIs
Lab, Lab support & PI Offices	25,010	25,010	81%	2,084
Core Facilities	1,010	1,010	3%	84
Cell and Tissue Storage	6,450	0		0
Conf center, exercise and showers	6,729	0		0
Food Service	1,000	1,000	3%	83
Admin and Support	3,920	3,920	13%	327
Total	44,119	30,940	100%	2,578

As proposed by the applicant, the estimated project cost is \$40 million with a building cost of \$34 million, project management and administrative costs of \$4 million and a contingency of \$2 million. In addition, Group 2 equipment amounts to \$1.4 million.

The overall cost is \$608/gsf, which is about half of the cost of the one other proposals in this funding category, and well below the average of \$934/gsf for applications in both the CIRM Institute and CIRM Center funding categories. The proposed design for the CIRM-funded building is only slightly different than the design of an existing building at this institution. Consequently, there is some experience in assessing the cost of this facility. The proposed site is located in an open space and not in an urban setting. This factor should provide convenient access for construction staging and activities which should contribute to the lower cost of the project.

The \$1.4 million budgeted for Group 2 Equipment is modest at \$29/gsf compared to other applications. The proposal indicates that nearly \$500,000 will be needed to equip each of the 12 laboratories, \$480,000 for shared equipment rooms and \$956,500 for core laboratories. This would indicate the need for an equipment budget of \$7.4 million (\$226/gsf) instead of the \$1.4 million included in the application. The proposal indicates that no existing equipment will be relocated to the building, though three current PIs are expected to be relocated to this facility. More recently, the applicant indicates (see comment letter of March 25<sup>th</sup>) that the planned equipment expenditure stated in its application is in error. The amount of \$500,000 is intended to satisfy all the equipment needs for 12 laboratories, which would equate to \$40,000 per PI. As confirmed, this modest amount suggests that there is a funding gap with respect to having sufficient equipment for the new facility at completion.

The CIRM cost for laboratory and PI related space (excluding cores) is \$1,815,443 per PI, eight percent lower than the \$1,964,968 per PI for the other CIRM Center proposal and about nine percent higher than the average of \$1,671,391 per PI for all CIRM Institutes and CIRM Centers.

### Sustainability & Innovation

The application indicates that the design is expected to achieve a LEEDS certification at the Silver level.

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### **LEVERAGE:**

Leverage is the institutional investments in excess of the required matching funds after conforming to the allowable amount for fees and administrative costs. The application indicates that in addition to the required \$5 million matching amount, the institution would provide leverage funds of \$40,080,747 to this project. This leverage calculation includes some past expenditures unrelated to the CIRM-funded project, including:

- \$4,772,600 as the present value of land
- \$8,764,000 as the present value of apportioned cost of land improvements
- \$2,164,000 for entitlements
- \$6,400,000 as a prorated share of an existing vivarium
- \$2,250,000 as the apportioned present value of central plant utilities serving the building, an existing auditorium and related design costs
- \$1,952,000 as prior expenditures for research

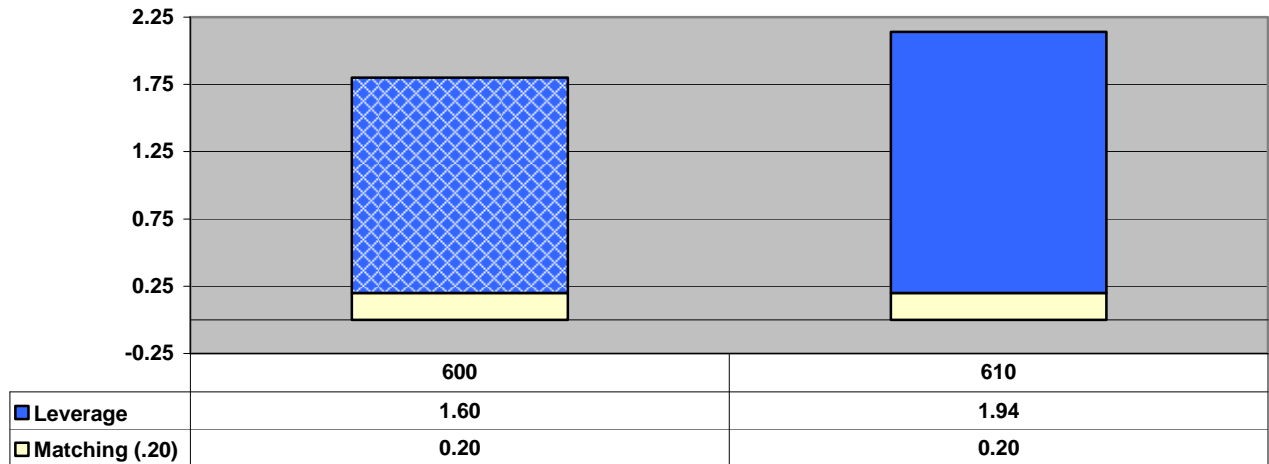
These costs total \$28,192,600. The allocation of a portion of the central utility plant would appear to be reasonable given that this represents a cost for services that would otherwise have to be constructed as part of this project. Some of the other costs, however, such as land and entitlements, are past expenditures which were incurred nine years ago, and a prorated share has been allocated to provide leverage for this project. In other cases, such as the vivarium, the applicant is suggesting that a past investment in shared resources available to the CIRM space should be included in leverage. Finally the leverage calculation also includes operating costs for research activities. The FWG needs to evaluate whether or not these costs should be included as leverage.

The remaining leverage represents funds the applicant is planning to provide to partially fund the project, which amounts to \$11,888,147.

If the full amount is approved, the leverage for this application amounts to \$40,080,747. This represents the institutional investments in excess of the required matching funds after conforming to the allowable amount of fees and administrative costs. The CIRM funds to leverage ratio is 1:1.60. When both the matching and leverage funding are considered, the ratio rises to 1:1.80. The following table compares the leverage for this application to the other applicants in the category of CIRM Centers.

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Matching and Leverage Ratios --Applications for  
CIRM Centers of Excellence



We also point out a concern regarding the matching funds. The applicant states that it is “*in continuing discussions with three different equity partners for development of the entitled facilities to complete our master plan. Each potential partner is expected to contribute cash to the potential partnership, which would be used to meet our matching fund requirement and any shortfall between CIRM funding and the actual cost of construction.*” Thus, the applicant will need to confirm that the \$5 million in matching funds and the \$11.9 million needed for construction of the facility is available for the project to proceed in July 2008 when the Notice of Grant Award is to be issued.

### URGENCY:

The applicant has prepared a site Master Plan that includes the proposed building. The local permitting authority has approved the Master Plan and related environmental documents, so there is no risk of permitting or environmental obstacles to on-time completion. The project would be put out to bid in August 2008. Construction activities would be sequenced, with earthwork beginning in August 2008 and construction scheduled for completion in July 2010. The project qualifies for priority consideration because completion is projected within two years from approval of the grant.

The applicant’s team for managing delivery of the project consists of the lead institutional project manager, a contract construction manager and a design firm. These firms previously worked with the institution to develop existing facilities at the site that are similar in design to the CIRM-funded facility. Several contractors have been prequalified to participate in bidding on the project.

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### **SHARED RESOURCES:**

The applicant indicates that cost savings will be achieved through sharing of core facilities. A total of 12 core laboratories are described that will be available to stem cell researchers. To the extent that future CIRM research grants contemplate use of these core facilities, it is expected that the costs for service provided by the cores will be less costly than including these cores in the CIRM-funded project.

Cores:

- Imaging
- Genomics
- Proteomics
- High-Throughput Screening (HTS)
- Electrophysiology
- Bioinformatics/Statistics
- Vivarium
- Transgenics
- Animal Behavior

### **FUNCTIONALITY:**

The design of the proposed building is identical to an existing building at the site, with some space revisions to accommodate the particular uses planned for this building.

## **SUMMARY OF ISSUES FOR THE FACILITIES WORKING GROUP EVALUATION**

**Cost and Functionality:** How will the FWG weigh the space (and the related costs) that are not directly in support of stem cell research including a fitness center, conference center, extensive food service, and a statewide/regional cell and tissue storage facility?

**Leverage:** How will the FWG weigh leverage funding identified by the applicant as past expenditures including the cost of land and entitlements, central utility plant, auditorium, vivarium, and research operating expenses?